

ABSTRACT

A multi-band compressed loop antenna is formed of multiple, directly and/or indirectly connected, compressed loops for use in a communication device to exchange energy over multiple frequency bands of operation. Each loop is formed by multiple and numerous segments arrayed in multiple diverse directions which forms a compressed loop so that the area of the antenna is decreased by combining such compressed loops. The multiple loops provide for resonances in multiple discrete frequency bands of operation. The multiple loops are arrayed in different configurations that include nested (concentric) and non-nested (non-concentric) loops as well as closely located and separated loops on the same or different layers of single or multi-layer structures.